

Serial No. 10/791,893

AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows.

Please replace the paragraph on page 2, lines 10-25, with the following:

Here, a moving electrode 2a is arranged between the neighboring fixed electrodes 1a and 1b. When an acceleration in the X-direction is exerted on the sensor of this constitution, the beams 4 are displaced in the X-direction, whereby distances vary among the fixed electrodes 1a, 1b and the moving electrode 2a, causing a change in the ~~capacity~~ capacitance CS1 between the fixed electrode 1a and the moving electrode 2a and in the ~~capacity~~ capacitance CS2 between the fixed electrode 1b and the moving electrode 2a. An equivalent circuit of the semiconductor mechanical quantity sensor is illustrated on the left side in Fig. 4. A pulse voltage Vcc has been applied across the fixed electrodes 1a and 1b. A change $\Delta C (= CS1 - CS2)$ in the ~~capacities~~ capacitances CS1 and CS2 that has occurred is taken out from the moving electrode 2, and is converted into a voltage $= (CS1 - CS2) \cdot Vcc/Cf$ through, for example, a switched capacitor circuit 5 illustrated on the right side in Fig. 4 to thereby detect the acceleration.

Please replace the paragraph from page 2, line 26, through page 3, line 5, with the following:

In order to improve the sensitivity of the sensor, so far, it was attempted to soften the spring constant kw by varying the sizes of beams 4, electrodes 1, 2, and weight 3 of the comb teeth structure, by increasing the mass m or by increasing the ~~capacity~~ capacitance C0. Figs. 5A - 5C illustrate a structure in which the beams 4 are folded twice to soften the spring constant of the beams 4 to be one-half in an attempt to double the sensitivity.

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Please replace the paragraph on page 3, lines 19-24, with the following:

In order to achieve the above object according to this invention, there are arranged, in the same direction, a plurality of mono-axial sensors for detecting a mono-axial mechanical quantity based on ~~capacities~~ capacitances among fixed electrodes and moving electrodes coupled to beams that are capable of undergoing displacement depending upon the acceleration.

Please replace the paragraph on page 5, lines 23-26, with the following:

Here, if the ~~capacity~~ capacitance between the electrodes 1 and 2 is denoted by C_0 , the spring constant of the beams 4 by k , the mass by m , and the distance between the electrodes 1 and 2 by d , then the sensitivity may be defined as follows: